



Please type a plus sign (+) in this box

+

PTO/SB (12-97)  
OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE  
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)	Application Number	09/936,095
	Filing Date	06/06/02
	First Named Inventor	Stemple
	Group Art Unit	1637
	Examiner Name	Strzelecka
	Attorney Docket Number	18921-001 NATL

U.S. PATENT DOCUMENTS							
Exam Initials	Cite No.	U.S. Patent Document No.	Issue Date	Name of Patentee(s) or Applicant(s)	Class	Sub Class	Filing Date If Appropriate
TJS	A1 ✓	4,811,218	03/07/89	Hunkapiller et al			06/02/86
	A2 ✓	5,171,534	12/15/92	Smith et al			12/15/92
	A3 ✓	5,302,509	04/12/94	Cheeseman			02/27/91
	A4 ✓	5,405,747	04/11/95	Jett et al			03/07/94
	A5 ✓	5,547,839	08/20/96	Dower and Fodor			12/06/90
	A6 ✓	5,728,529	03/17/98	Metzker and Gibbs			11/06/95
	A7 ✓	5,798,210	08/25/98	Canard and Sarfati			03/28/94
	A8 ✓	5,821,058	10/13/98	Smith et al			12/21/94
	A9 ✓	5,846,727	12/08/98	Soper et al			05/29/97
	A10 ✓	5,853,668	12/29/98	Begg et al			05/25/95
	A11 ✓	5,858,671	01/12/99	Jones			11/01/96
	A12 ✓	5,716,825	02/10/98	Hancock et al.			11/01/95
	A13 ✓	5,919,626	07/06/99	Shi et al.			06/06/97
	A14 ✓	6,136,543	10/24/00	Anazawa et al.			01/31/97
	A15 ✓	6,210,896	04/03/01	Chan			08/13/99
	A16 ✓	6,255,083	07/03/01	Williams			12/13/99
TS	A17 ✓	5,856,174	01/05/99	Lipshutz et al.			01/19/96

FOREIGN PATENT DOCUMENTS							
Exam Initials	Cite No.	Foreign Patent Document		Name of Patentee(s) or Applicant(s)	Date of Publication	Translation Yes No	
		Office	Number				
TS	B1✓	WO	98/33939	Hitachi, LTD	6 August 1998		X
	B2✓	GB	2 102 005 A	MTA Kozponti Kemiai	26 January 1983		
	B3✓	WO	90/13666	Amer-Sham International PLC	15 November 1990		
	B4✓	WO	91/06678	SRI International	16 May 1991		
	B5✓	WO	93/21340	Medical Research Council	28 October 1993		
	B6✓	WO	94/21822	Koster, Hubert	29 September 1994		
	B7✓	WO	96/31622	Isis Innovation LTD	10 October 1996		
	B8✓	WO	00/36152	Li-Cor, Inc.	22 June 2000		
TS	B9	WO	99/05315	Medical Biosystems LTD	4 February 1999		

Teresa Strzelecka

5/15/05

BEST AVAILABLE COPY

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Exam Initials	Cite No.	Name of Author, Title (when appropriate), Publication, Volume, Page(s), Date, Etc.
	C1 ✓	Brandis <i>et al.</i> "Slow Rate of Phosphodiester Bond Formation Accounts for the Strong Bias that Taq DNA Polymerase Shows against 2',3'-Dideoxynucleotide Terminators.." Biochemistry 35: 2189-2200 (1996).
	C2 ✓	Burns <i>et al.</i> "An Integrated Nanoliter DNA Analysis Device." Science 282: 484-487 (1998).
	C3 ✓	Chan and Nie "Quantum Dot Bioconjugates for Ultrasensitive Nonisotopic Detection." Science 281: 2016-2018 (1998).
	C4 ✓	Dickson <i>et al.</i> "On/off blinking and Switching Behaviour Of Single Molecules of Green Fluorescent Protein." Nature 388: 355-358 (1997).
	C5 ✓	Dickson <i>et al.</i> "Three-Dimensional Imaging of Single Molecules Solvated in Pores of Poly(acrylamide) Gels." Science 274: 966-971 (1996).
	C6 ✓	Dovich <i>et al.</i> "DNA Sequencing By Capillary Electrophoresis." Electrophoresis 18: 2393-2399 (1997).
	C7 ✓	Gordon <i>et al.</i> "Quantitative Fluorescence Resonance Energy Transfer Measurements Using Fluorescence Microscopy." Biophys. J. 74: 2702-2713 (1998).
	C8 ✓	Ha <i>et al.</i> "Probing The Interaction Between Two Single Molecules: Fluorescence Resonance Energy Transfer Between A Single Donor And A Single Acceptor." Proc. Natl. Sci. USA 93: 6264-6268 (1996).
	C9 ✓	Hacia, "Resequencing and Mutational Analysis Using Oligonucleotide Microarrays." Nature Genetics Supp. 21: 42-47 (1999).
	C10 ✓	Harada, <i>et al.</i> "Single-Molecule Imaging of RNA Polymerase-DNA Interactions in Real Time." Biophys. J. 76: 709-715 (1999).
	C11 ✓	Hiratsuka <i>et al.</i> "New Ribose-Modified Fluorescent Analogs of Adenine and Guanine Nucleotides Available as Substrates for Various Enzymes." Biochim Biophys Acta 742: 496-508 (1983).
	C12 ✓	Idury and Waterman, "A New Algorithm for DNA Sequence Assembly." J. Comput. Biol. 2: 291-306 (1995).
	C13 ✓	Ishijima <i>et al.</i> "Simultaneous Observation of Individual ATPase and Mechanical Events by a Single Myosin Molecule During Interaction with Actin." Cell 92: 161-171 (1998).
	C14 ✓	Iwane <i>et al.</i> "Single Molecular Assay of Individual ATP Turnover by a Myosin-GFP Fusion Protein Expressed In Vitro." FEBS Lett. 407: 235-238 (1998).
	C15 ✓	Izawa <i>et al.</i> "Recognition Sites of 3'-OH Group by T7 RNA Polymerase and Its Application to Transcriptional Sequencing." J. Biol. Chem. 273: 14242-14246 (1998).
	C16 ✓	Keller <i>et al.</i> "Single-Molecule Fluorescence Analysis in Solution." Applied Spectroscopy 50: 12A-32A 1996.
	C17 ✓	Kricka, "Miniaturization of Analytical Systems." Clinical Chemistry 44:9: 2008-2014 (1998).
	C18 ✓	Luckey <i>et al.</i> "High Speed DNA Sequencing By Capillary Electrophoresis." Nucleic Acids Res 18: 4417-4421 (1990).
	C19 ✓	Mertz <i>et al.</i> "Single-Molecule Detection By Two-Photon-Excited Fluorescence." Opt. Lett. 20: 2532-2534 (1995).
	C20 ✓	Metzker <i>et al.</i> "Termination Of DNA Synthesis by Novel 3'-Modified-Deoxyribonucleoside 5'-Triphosphates." Nucleic Acids Res. 22: 4259-4267 (1994).
	C21 ✓	Metzker <i>et al.</i> "Elimination of Residual Natural Nucleotides from 3'-O-Modified-dNTP Syntheses by Enzymatic Mop-Up." BioTechniques 25.5: 814-817 (1998).
	C22 ✓	Metzker <i>et al.</i> "Quantitation of Mixed-Base Populations of HIV-1 Variants by Automated DNA Sequencing with BODIPY <sup>®</sup> Dye-Labeled Primers." BioTechniques 25.3: 446-462 (1998).
	C23 ✓	Nie <i>et al.</i> "Probing Individual Molecules with Confocal Fluorescence Microscopy." Science 266: 1018-1021 (1994).
	C24 ✓	Nie and Zare, "Optical Detection of Single Molecules." Annu. Rev. Biophys. Biomol. Struct. 26: 567-596 (1997).
TS	C25 ✓	Orita <i>et al.</i> "Rapid and Sensitive Detection of Point Mutations and DNA Polymorphisms Using the Polymerase Chain Reaction." Genomics 5: 874-879 (1989).

Teresa Stnelelea

5/15/05

BEST AVAILABLE COPY

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Exam Initials	Cite No.	Name of Author, Title (when appropriate), Publication, Volume, Page(s), Date, Etc.
	C26	Pierce <i>et al.</i> "Imaging Individual Green Fluorescent Proteins." Nature 388: 338 (1997).
	C27	Prober <i>et al.</i> "A System for Rapid DNA Sequencing With Fluorescent Chain-Terminating Dideoxynucleotides." Science 238: 336-341 (1987).
	C28	Rawlinson <i>et al.</i> "Analysis of the Complete DNA Sequence of Murine Cytomegalovirus." J. Virol 70: 8833-8849 (1996).
	C29	Smith <i>et al.</i> "Fluorescence Detection in Automated DNA Sequence Analysis." Nature 321: 674-679 (1986).
	C30	Sutton <i>et al.</i> "TIGR Assembler: A New Tool for Assembling Large Shotgun Sequencing Projects." Genome Sci. Technol. 1: 9-19 (1995).
	C31	Tokunaga <i>et al.</i> "Single Molecule Imaging of Fluorophores and Enzymatic Reactions Achieved by Objective-Type Total Internal Reflection Fluorescence Microscopy." Biochem. Biophys. Res. Comm. 235: 47-53 (1997).
	C32	Venter <i>et al.</i> "Shotgun Sequencing of the Human Genome." Science 280: 1540-1545 (1998).
	C33	Wang <i>et al.</i> "Force and Velocity Measured for Single Molecules of RNA Polymerase." Science 282: 902-907 (1998).
	C34	Yin <i>et al.</i> "Transcription Against an Applied Force." Science 270: 1653-1657 (1995).
TS	C35	International Search Report for PCT/GB00/00873 dated August 18, 2000.

\* a copy of this reference is not provided as it was previously cited by or submitted to the office in a prior application, Serial No. \_\_\_\_\_, filed \_\_\_\_\_, and relied upon for an earlier filing date under 35 U.S.C. §120 (continuation, continuation-in-part, and divisional applications).

Examiner Signature	Teresa Stuebel	Date Considered	5/15/05
-----------------------	----------------	--------------------	---------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered.

NYC 319196v1

BEST AVAILABLE COPY